



## Sealants “... effective in the primary prevention of tooth decay.”<sup>1</sup>

### What is the Public Health Issue?

Oral health is integral to general health.<sup>2</sup> Although preventable, tooth decay is a chronic disease affecting all age groups. In fact, it is the most common chronic disease of childhood.<sup>2</sup> The burden of disease is far worse for those who have restricted access to prevention and treatment services. Tooth decay, left untreated, can cause pain and tooth loss. Untreated decay has been associated with difficulty in eating and being underweight.<sup>3</sup> Untreated decay and tooth loss can have negative effects on an individual's self esteem and employability.

#### ***In the U.S. tooth decay affects:*<sup>3</sup>**

- ✓ 1 in 4 elementary school children
- ✓ 2 out of 3 adolescents
- ✓ 9 out of 10 adults

### What is the impact of sealants?

Sealants are a plastic material placed on the pits and fissures of the chewing surfaces of teeth where up to 90% of decay occurs in school children.<sup>4</sup> Sealants prevent tooth decay for those teeth by providing a physical barrier between the teeth and decay-causing bacteria. Sealants also cavities from growing and can prevent the need for expensive fillings. Sealants are 100% effective if they are fully retained on the tooth.<sup>2</sup> According to the Surgeon General's 2000 report on oral health, sealants have been shown to reduce decay by over 70 percent.<sup>1</sup> The combination of sealants and fluoride has the potential to virtually eliminate tooth decay in school-age children.<sup>5</sup> Sealants are most cost-effective when used in children at increased risk of tooth decay.<sup>6</sup>

### How is Maine doing?

A 1999 survey revealed that while 48% of Maine third graders (aged 8 years) had at least one dental sealant, more than 50% needed one or more additional sealants placed. Almost half of Maine's third graders had experienced tooth decay.<sup>7</sup>

#### ***Healthy people 2010 objective:*<sup>8</sup>**

- ✓ Increase sealants in 8 year old first molars and 14 year old first and second molars to 50%.
- ✓ Reduce decay experience in children under 9 years old to 42%.

#### ***Healthy Maine 2010 objective:*<sup>9</sup>**

- ✓ Increase the proportion of children who have received dental sealants on their molar teeth to 50%.

### What is Maine doing?

In 1998, the Maine Dental Sealant Program (MDSP) was added as a component of the Maine Oral Health

Program's School Oral Health Program (SOHP), a program providing schools with classroom based education, dental screening, and fluoride mouthrinses. The MDSP provides sealants to second graders in schools and communities where children are at higher risk for tooth decay. It hopes to include all schools participating in the SOHP (approximately 40% of Maine's K-6 grade population). Over the past four years, the MDSP has reached 121 schools, and placed almost 20,000 sealants for 6,100 children. Sealant retention rate after one year is high - ranging from 89 to 99.9 percent.<sup>10</sup>

In 2002, the National Task Force on Community Preventive Services, an independent, non-federal, multi-disciplinary Task Force appointed by the director of the Centers for Disease Control and Prevention (CDC), strongly recommended school sealant programs as an effective strategy to prevent tooth decay.<sup>3</sup> The CDC further estimates that if 50% of children at high risk participate in school sealant programs such as Maine's, then over half of their tooth decay would be prevented and money would be saved on their treatment costs.<sup>4</sup>

#### ***Strategies for Maine's future:***

- ✓ Continue to promote and fund the SOHP/MDSP and support extension of these and other community-based programs, such as water fluoridation.
- ✓ Support the expansion of the MDSP to include the 6<sup>th</sup> grade.
- ✓ Increase public awareness of effectiveness of sealants to increase demand for sealants for all children.

## References:

1. National Institutes of Health (NIH). Consensus Development Conference on Diagnosis and Management of Dental Caries Throughout Life. Bethesda, MD. March 26-28, 2001. Conference Papers. J Dent Educ 2001; 65: 935-1179
2. U.S. Department of Health and Human Services. *Oral Health in America: a report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health 2000.
3. Truman BI, Gooch BF, Sulemana I et al. and the Task Force on Community Preventive Services. Reviews of evidence on interventions to reduce dental caries, oral and pharyngeal cancers, and sports-related craniofacial injury. American Journal of Preventive Medicine 2002; 23 (1S)
4. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Preventing Dental Caries. [http://www.cdc.gov/OralHealth/factsheets/dental\\_carries.htm](http://www.cdc.gov/OralHealth/factsheets/dental_carries.htm)
5. Burt BA, Eklund SA. Dentistry, dental practice, and the community. 5<sup>th</sup> ed. Philadelphia: W.B. Saunders; 1999.
6. Weintraub JA, Stearns SC, Burt BA, Beltran E, Eklund SA. A retrospective analysis of the cost-effectiveness of dental sealants in a children's health center. Soc Sci Med 1993; 36(11): 1483-93.
7. State of Maine: The 1999 Smile Survey. Results of the 1999 Statewide Oral Health Needs Assessment. May 2000.
8. US Department of Health and Human Services, Healthy People 2010. Washington DC: 2000. [www.health.gov/healthypeople/](http://www.health.gov/healthypeople/)
9. Bureau of Health, Maine Department of Human Services. Healthy Maine 2010: Longer and Healthier Lives. December 2002.
10. Bureau of Health, Maine Department of Human Services. Maine School Oral Health Program.

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John Elias Baldacci, Governor  
John R. Nicholas, Commissioner